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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,691	07/10/2006	Alan Bax	101016-00002	3781

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EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,691	Applicant(s) BAX ET AL.	
	Examiner TIMA M. MCGUTHRY-BANKS	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-11, 13-17 is/are rejected.
- 7) ☒ Claim(s) 2 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/14/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Status of Claims

Claims 1, 2, 4, 5, 7-9, 11 and 15-17 are as originally filed, Claims 3, 6, 10 and 12-14 are currently amended.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 14 August 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The publication by Fleet was not filed.

Claim Objections

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12 recites removing the base metals, yet Claim 1, step (b)

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recites forming a leach solution containing base metals. The precipitate in step (a) would not be the same precipitate in step (b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' recitations of examples and embodiments in Claims 16 and 17, respectively, fail to set forth the metes and bounds of the subject matter and do not set forth the subject matter as specified by MPEP § 2171.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

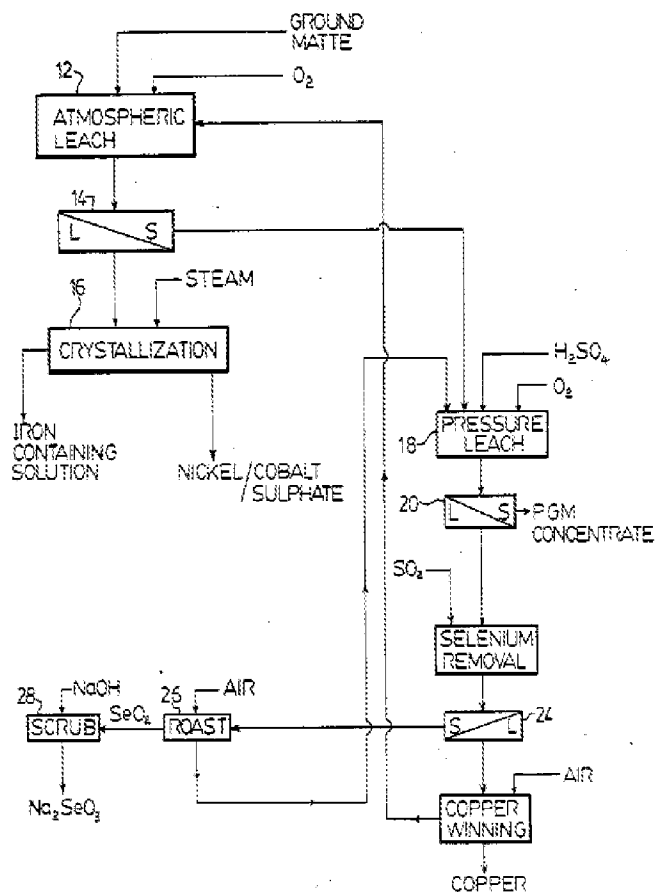
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kerfoot et al (US 4,571,262).

Kerfoot et al anticipates the claimed invention. Kerfoot et al teaches recovering platinum group metals (PGM) as shown below in the figure:

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Regarding Claim 1, copper and PGM are precipitated in step 12 (column 3, lines 3-16). Step (b) is reflected in the figure at 18 and 20. Regarding step (c), PGM concentrate is sent to a refinery (column 4, lines 9-11), and the leach solution is treated to recover copper. Regarding Claims 3-5, the pH range is 2-4 (column 3, line 27). Regarding Claim 6, step 18 is pressure leaching. Regarding Claims 16 and 17, Kerfoot et al teaches the claimed embodiments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerfoot et al as applied to claims 1 and 6 above, and further in view of Fleming et al (US 2002/0152845).

Kerfoot et al discloses the invention substantially as claimed. However, Kerfoot et al does not disclose a further leach step as in Claim 7, the steps of Claim 10 precipitating base metals as in Claim 13. Fleming et al teaches recovering a precious metal from a host material by subjecting the host material to an oxidative pressure leach process to recover substantially all of the base metal (abstract). Regarding Claim 7, the precious metal precipitate could be treated in a small pressure leach reactor to produce a very high grade precious metal residue [0094]. Regarding Claim 10, the host material is oxidized to sulfuric acid [0064]. The PGM values are in anionic polyatomic ions, and the base metals are in cationic form [0072-0078]. Ion exchange resin is used to recover PGM [0079]. Regarding Claim 13, iron is precipitated (Figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the process of Fleming et al with the process of Kerfoot et al, since Fleming et al teaches an improved technique for the recovery of precious metals.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerfoot et al as applied to claims 1 and 6 above, and further in view of Thomas et al (US 4,615,731).

Kerfoot et al discloses the invention substantially as claimed. However, Kerfoot et al does not teach pressure leaching in a caustic leach followed by an acid leach as in Claim 8 or recovering PGM values by a reduction leach step as in Claim 9. Thomas et al teaches hydrometallurgical processing of precious metal-containing materials. The process includes a caustic leach and an acid leach (column 7, lines 41-46). Regarding Claim 9, the precious metals are recovered from the residue by standard or known techniques such as dissolving in aqua regia (column 9, lines 62-65). Regarding Claim 8, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have this type of leach step in Kerfoot et al, since

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Thomas et al teaches that this process separates heavy metal contaminants from precious metals (column 7, lines 41-43).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kerfoot et al in view of Fleming et al as applied to claims 1 and 10 above, and further in view of GB 1,153,717.

Kerfoot et al in view of Fleming et al discloses the invention substantially as claimed. However, Kerfoot et al in view of Fleming et al does not disclose incinerating to form an ash rich in PGM values or eluting as in Claim 11. Kerfoot et al in view of Fleming et al teaches that the leach solution contains less than 3 mg/L platinum group metals (column 3, lines 26 and 27). GB '717 teaches recovering noble resins from a solution by an ion exchange resin (page 1, lines 73 and 74). One alternative to remove platinum is to ignite the resin in the oven; the second is to elute with acid (page 2, lines 18-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the recovery method of GB '717 in the process of Kerfoot et al in view of Fleming et al, since GB '717 teaches recovering noble metals such as gold, platinum, palladium and rhodium in high purity form, with minimal processing; the process requires only gravity circulation or a low energy power source for extraction (page 1, lines 59-67).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerfoot et al as applied to Claim 1 above, and further in view of GB '717.

Kerfoot et al discloses the invention substantially as claimed. However, Kerfoot et al does not disclose recovering any PGM values remaining in solution after the non-selective precipitation as in Claim 14 or incinerating to form an ash rich in PGM values or eluting as in Claim 15. Kerfoot et al teaches that the leach solution contains less than 3 mg/L platinum group

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metals (column 3, lines 26 and 27). GB '717 teaches recovering noble resins from a solution by an ion exchange resin (page 1, lines 73 and 74). One alternative to remove platinum is to ignite the resin in the oven; the second is to elute with acid (page 2, lines 18-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the recovery method of GB '717 in the process of Kerfoot et al, since GB '717 teaches recovering noble metals such as gold, platinum, palladium and rhodium in high purity form, with minimal processing; the process requires only gravity circulation or a low energy power source for extraction (page 1, lines 59-67).

Allowable Subject Matter

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Atkinson et al teaches a method for recovering platinum group metals from a catalyst material by leaching with a cyanide solution to form soluble platinum group metal-cyanide complexes in solution. The pregnant leach solution is then heated to precipitate the platinum group metals (abstract). However, Atkinson et al does not teach leaching after precipitation; the resulting solutions produce high grade platinum group metal products (column 4, lines 1-8). Additionally, Atkinson et al does not teach precipitating base metals.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/T. M. M./
Examiner, Art Unit 1793
5 August 2008